

What is claimed is:

1 A compression-type chain for transmission of power from a driving sprocket having
2 teeth to a driven sprocket having teeth, comprising:

3 a) a plurality of sprocket-engaging blocks (4) having a body with a sides
4 and a thickness therebetween, an upper surface, and teeth opposite
5 the upper surface, adapted to engage with the teeth of the driving
6 sprocket and the teeth of the driven sprocket;

7 b) a plurality of guide links (5), each guide link having a body with a
8 thickness, a top surface, a bottom surface, a leading end and a
9 trailing end;

10 each guide link being movably fastened in pairs on opposite sides of
11 the sprocket-engaging blocks to two adjoining sprocket-
12 engaging blocks, the guide link being dimensioned so that
13 when the guide links and sprocket-engaging blocks are
14 assembled, the top surfaces of the guide links project further
15 than the top surfaces of the sprocket-engaging blocks, forming
16 rails defining a trough therebetween;

17 all of the guide links and sprocket-engaging blocks fastened together
18 forming a continuous chain; and

19 c) a retaining band (10) running around the chain in the trough, contacting
20 the upper surface of the sprocket engaging blocks;

21 so that when the chain is engaged with the driven sprocket and the driving
22 sprocket, and rotational force is applied to the driven sprocket, the
23 force is transferred by the teeth of the driving sprocket to the
24 sprocket-engaging blocks engaged with the driving sprocket, then to
25 the guide links fastened to the sprocket-engaging blocks, and the
26 leading edge of each guide link between the driving sprocket and
27 the driven sprocket transfers force to the trailing end of the next

28 guide link, until the force is transferred to the sprocket-engaging
29 blocks engaged with the driven sprocket, and thence as a rotational
30 force to the driven sprocket.

1 2. The chain of claim 1, in which the guide links are fastened together around the
2 sprocket-engaging blocks by pins running through holes in the guide links and the
3 sprocket-engaging blocks.

1 3. The chain of claim 1, further comprising a plurality of pins running between the pairs of
2 guide links in the trough, retaining the band therein.

1 4. The chain of claim 1, in which the retaining band comprises a plurality of laminations
2 of steel band.

3 5. The chain of claim 1, in which the retaining band is made of a polymer.

1 6. The chain of claim 1, in which the leading end and trailing end of the guide links are
2 substantially flat.

1 7. The chain of claim 1, in which the guide link comprises a tapered area forming a lower
2 part of the leading end and trailing end, to provide clearance as the chain wraps
3 around the sprockets.